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Information Technology and Communication Services (ITACS) ITACS Technology News

2012-12

NPS Information Technology and Communications Services (ITACS) Technology News / December 2012

Monterey, California ; Naval Postgraduate School

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NAVAL POSTGRADUATE SCHOOL
ITACS
INFORMATION TECHNOLOGY AND COMMUNICATIONS SERVICES

TECHNOLOGY NEWS DECEMBER 2012

CYBERSECURITY AND PRIVACY

New Cybersecurity Technology, Network Access Control (NAC) Update

NAC was successfully deployed to the Library, Ingersoll, Bullard, Watkins, Halligan, Glasgow, Spanagel, and Herrmann Halls this fall. During the first week of December it was also successfully deployed to all campus wireless users who installed the SafeConnect policy key on their laptops and workstations. For those off-campus VPN users, you should now download the policy key at http://www.nps.edu/technology. The intent is to have all wired and wireless network connections (including VPN) monitored by the NAC by the end of December. Regular updates will be provided as feedback is received from users. Please pass the word to your colleagues and refer to the Security Center wiki for the latest information: https://wiki.nps.edu/x/TgCWBw

In January, we will work with everyone who either does not have Antivirus installed and running and/or does not keep their operating system updated. For those users who do not comply by February, you will be removed from the NPS network until you are in compliance. This is in preparation for the Cybersecurity Inspection (CSI) in February. The CSI is conducted by the FLTCYBER Office of Compliance and Assessment (OCA) to review the sustained effectiveness of compliance requirements and controls tested during their onsite visit. The NAC is designed to assist us in meeting some of the compliance challenges, and your support is greatly appreciated. The over-riding goal in ITACS is to support the academic mission so if any problems are encountered that might undermine that goal, implementation will stop immediately.

TECHNOLOGY ASSISTANCE CENTER (TAC)

BRING YOUR OWN DEVICE (BYOD)

BYOD Support:

Increasingly, NPS faculty, staff and students want to use their personal mobile devices to help them do their work at NPS. These devices fall into various categories such as smart phones, tablets, and special purpose devices such as eReaders.

The networks they use include local wireless networks (such as the NPS wireless network) and carrier wireless networks (such as Verizon and AT&T).

With such a large number and variety of devices, it is difficult to support every one that might connect to our network. Therefore, a standard support policy is being developed for mobile devices.

Full Support will be provided for: government owned phones purchased on managed cell phone accounts. This includes hardware, software, and configuration to work with NPS services.

For further information, go to the wiki Mobile Device Policy page:

https://wiki.nps.edu/display/TAC/Mobile+Device+Support+Policy#MobileDeviceSupportPolicy-mobile

Federal Employee and Student Discounts (personal devices):

Also on that page you will find information on federal employee and student discounts (for personal devices), with links that will help you to verify if you are eligible for any of these discounts.

Everyone looks forward to the next "must have" device. If there are major devices missing from this page, please post a comment at https://wiki.nps.edu/display/TAC/Mobile+Support.

ENTERPRISE INFORMATION SYSTEMS

KFS ENHANCEMENTS FOR DECEMBER 2012

During the month of December, several user experience enhancements were made to KFS thanks to the work of the KFS Functional and Technical teams:

1. Added Payment Amount to the Purchase Order PDF when the Purchase Order is in a Closed Status in KFS.

2. Moved the Related Documents tab to the top of the Requisition and the Purchase Order, just below the Document Overview Tab.

3. Added the fix to reinstate the feature which copied Notes and Attachments from the Requisition to the new PO upon Contract Manager Assignment.

4. General Ledger entry which appears on the Financial Processing tab now includes the ability to search for transactions by a date range.

5. Indirect Cost Recovery (ICR) code has been updated to account for labor transactions that post on a single account across more than one month, but with the same posting dates.

6. Labor Ledger view has been updated to eliminate confusion regarding the display of hours associated with labor.

7. Indirect Cost Recovery calculations were modified slightly to only include labor earn codes that represent hours worked.

8. Purchase Orders now allow back posting to expired Account expiration date to facilitate processing.

9. Contract Manager Action status of 'Need More Information' request email content now retained in Notes and Attachments on Purchase Order.

10. Additional Purchase Log sanity check was added on quantity based items where price entered and Purchase Order price do not match.

RESEARCH COMPUTING

ITACS Research Computing Introduces the Latest in GPU Architecture.

During the Winter Break at NPS (17 Dec – 04 Jan), Research Computing will be scaling the Hybrid Cluster "Hamming" with additional shared hardware. First is the addition of five new dense compute nodes. Each compute node is powered by 64 cores of AMD Opteron CPUs. This will bring the total CPU core count to 2464 cores.

The next addition is the introduction of the Kepler GPU node. This node is front-ended with 32 cores of AMD 6300 ABU DABI CPU's with two NVIDIA TESLA Kepler K20 GPU's for a total GPU core count of 4992. Some areas where the K20 GPU node will assist users performing HPC computational services are: Seismic Processing, CFD, CAE, Financial Computing, Computational Chemistry, Physics, Data Analytics, Satellite Imaging, and Weather & Ocean Modeling. A Grid

Management Unit in the K20 / GK110 enables a feature called Dynamic Parallelism, which means that the GPU can schedule its own work. Previously only the CPU could schedule work on the GPU. Dynamic Parallelism means that more code can run entirely on the GPU, for greater efficiency and simplified code. Another GK110 advance is Hyper-Q, which provides 32 simultaneous connections between CPU and GPU, compared to just one in Fermi. The result is that multiple CPUs can launch work on the GPU simultaneously, greatly improving utilization. *NVIDIA now projects that by 2014, 75 per cent of HPC customers will use GPUs for general purpose computing.*

PARTNERSHIPS AND OUTREACH

CENIC/Internet2 Office Opening & Listening Tour: Dr. Christine Haska and Mr. Joe LoPiccolo visited the Internet2 and CENIC new office spaces in Emeryville, CA to hear about their progress with 100GB networking deployments and new technological initiatives. All projects are focused on industry and higher education, primarily the nation's major research universities including NPS. Internet2 and CENIC, close partners with technology leaders and innovative networking companies, will now have an office near its West Coast members and will influence the direction technology companies are taking involving everything from e-textbooks to Big Data scientific research.

Classroom & Lab Tours: Annual Lab and Classroom tours and inspections were conducted over the past month; the team consisted of Dr. Christine Haska, Mr. Joe LoPiccolo, Mr. Thomas Blood, and Mr. Paul Minik. The primary objective was to examine the overall operability of the learning spaces, with emphasis on functionality and technology. These spaces include VTC suites, conference rooms, labs, classrooms, podiums and auditoriums. In addition, to assessing the infrastructure, computing and A/V determinations on lifecycle replacements were assessed. A thorough analysis will be presented to the IT Task Force in February, 2013.

Monterey Executive Big Data Seminar-Executive Briefing: Mr. Joe LoPiccolo, Mr. Thomas Blood, Mr. Matt Clayman attended a local session on "Big Data." On December 5th, 2012, Advanced Onion, Inc. hosted a collaborative Big Data event in conjunction with both NetApp and Data Tactics. In attendance were 30-plus representatives of organizations including NPS, DMDC, FNMOC, DLI, and other members of the Monterey CIO Council or their representatives. "Big Data" refers to data sets whose volume, speed and complexity is beyond the ability of typical tools to capture, store, manage and analyze. Many government organizations are currently at an inflection point in which large amounts of data can either become a burden to IT infrastructure, or, through the use of the right technology and tools, the data can continue to propel the organization forward to further success. Both NetApp and Data Tactics offer solutions in which the latter scenario is achievable. Speakers included Mr. Dave Denson, ISR Architect for NetApp, who is a long-time expert in the large-scale data realm, as well as Mr. Lee Shabe, Vice President of Data Tactics. Both discussed the current challenges, trends, forecasts and a variety of solutions (including Hadoop) with regards to the handling, examination and storage of big data as well as the benefits and advantages both companies bring to the table.

TAC STATISTICS

From 1 – 26 December 2012, the Technology Assistance Center (TAC) received 3,234 requests for assistance, 2,479 of which were resolved by the Tier 1/Tier 2 areas. The remaining 755 requests were escalated to groups outside of TAC for specialized assistance. Overall, there has been an 11% decrease in requests for assistance compared to the month of December 2011. Requests for assistance were categorized as follows:

Phone: 1,653
E-Mail: 1,301
Walk-in: 265
Web: 1
Technician: 14

This month, 94% of all calls were resolved within the Service Level Agreement (SLA). Those that were carried over are awaiting parts or pending information from customers.